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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/528,095

03/10/2006

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EICH3001/FJD

5838

23364 7590 03/25/2008

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EXAMINER

WEST, PAUL M

ART UNIT

PAPER NUMBER

2856

MAIL DATE

DELIVERY MODE

03/25/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/528,095	Applicant(s) HUBER ET AL.	
	Examiner PAUL M. WEST	Art Unit 2856	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 17-32 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 17-32 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____. |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 17,18,21,23-26,30,31 rejected under 35 U.S.C. 102(b) as being anticipated by Gärtner (DE 2429495).

3. Regarding claims 17 and 18, Gärtner teaches an orienting mechanism for a measuring device, comprising: a pivotable, ball-shaped, clampable member 14, which is securable to a container 20 and which permits a metallic sealing of the interior of the container using copper sealing member 17.

4. Regarding claim 21, the measuring device comprises an ultrasonic fill level measuring device 2.

5. Regarding claim 23, the orienting mechanism includes a tube 1,1a which serves as a cable conduit for cable 6.

6. Regarding claim 24, the ball-shaped member 14 is arranged around the tube 1,1a.

7. Regarding claim 25, the tube 1,1a is displaceably arranged in the ball-shaped member 14 (Fig. 3).

8. Regarding claim 26, a connection apparatus 5 is arranged on an end of the tube 1 which could be used to attach to a drive or sensor of the fill level measuring device 2.

9. Regarding claim 30, the orienting mechanism includes a holding plate 15 wherein the ball-shaped member 14 is secured on a flange 16 on the container by the holding plate (see Fig. 3).

10. Regarding claim 31, the ball-shaped member 14 is clamped on a cover plate 16 closing a manhole 19 of the container 20.

Claim Rejections - 35 USC § 103

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

12. Claims 19,20 and 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gärtner.

13. Regarding claims 19 and 20, Gärtner does teach using an o-ring made of copper 17 but does not teach using an elastomeric o-ring seal. Official Notice is taken that elastomeric o-rings are a common and well-known method of sealing a circular opening in a container. I would have been obvious to one of ordinary skill in the art to use an elastomeric o-ring seal with the mechanism of Gärtner because elastomeric materials conform to small irregularities in the sealing surface to ensure an effective seal.

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14. Regarding claim 32, Gärtner does teach the cover plate 16 being a separate piece from the container 19,20 but also teaches it being welded to the container.

However it would have been obvious to one of ordinary skill in the art to attach the cover plate to the container in any number of more easily detachable ways, such as with screws or a threads, in which case the cover plate would be able to be swung with the ball-shaped member away from the container. Attaching the cover plate in one of these alternative ways would allow for the easy exchange of different cover plates which could accommodate differently sized measuring devices or be made of different materials depending on the specific use required.

15. Claim 22 is rejected under 35 U.S.C. 103(a) as being unpatentable over Gärtner in view of Pfändler (5,408,168).

16. Regarding claim 22, Gärtner does not teach the measuring device comprising a tuning fork limit level measuring device. Pfändler teaches a tuning-fork limit level measuring device which monitors a filling level in a container in which the device is mounted (Fig.1; Col. 3, lines 1-8; Col. 3, lines 47-52). It would have been obvious to one of ordinary skill in the art to combine the teachings of Pfändler with the device of Gärtner because it would allow for limit level or threshold level detection of a filling material in container while allowing for greater versatility, because the tuning fork element can be installed in the top or the side of a container and still detect a filling limit level.

17. Claims 27-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gärtner in view of Schneider (5,926,152).

18. Regarding claim 27, Gärtner does not teach the measuring device being a microwave fill level measuring device. Schneider teaches a microwave fill level measuring device which is mounted to a container and is used to determine the fill level in the container (Fig. 1; Col. 3, lines 26-35). It would have been obvious to one of ordinary skill in the art to combine the teachings of Schneider with the device of Gärtner because a microwave level measuring device provides an advantages over ultrasonic in that microwaves measuring devices are not as susceptible to variations due to temperature fluctuations.

19. Regarding claims 28 and 29, Gärtner teaches the device comprising a tube 12 which serves as a hollow conductor on which the ball-shaped member 14 is arranged (Fig. 3).

Conclusion

20. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Note that Malcom (6,227,501) and Pawelek et al. (2002/0092370) both teach pivotable, ball-shaped, clampable mountings for probes.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to PAUL M. WEST whose telephone number is (571)272-8590. The examiner can normally be reached on Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hezron Williams can be reached on (571) 272-2208. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Hezron Williams/

Supervisory Patent Examiner, Art Unit 2856